

REMARKS

The substance of the Interview on July 26, 2006 addressed three issues. In the first issue, Applicant reminded the Examiner that he had issued two restrictions. The first restriction mailed 6/29/2005 broke the claims into two groups.

1st Group I Claims 1-14, 26, 27 and 29-42 drawn to a fiber reinforced laminate classified in class 428, subclass 114.

1st Group II Claims 15-25 and 28 drawn to a method for making a fiber reinforced laminate material, classified in class 464, subclass 464

Applicant confirmed election to Group I claims in amendment and response dated July 38, 2005. In the amendment Applicant elected Group I claims, and cancelled the other claims.

Applicant was then notified in a subsequent office action mailed on October 20, 2005 that the application had been moved Group Art Unit 1774, and that after studying the Applicant's remarks the Examiner had issued another restriction. This was unusual, as the only remarks made by Applicant were to elect Group I, and cancel claims 15-25 and 28. The second restriction broke the first restriction 1st Group I claims into the following:

2nd Group I Claims 1, 4-14, 26, 27, 29, 33-37 and 39 drawn to a fiber reinforced laminate classified in class 4287, subclass 114.

2nd Group II Claims 2,3, 29-32, 38 and 40-42 drawn to a fiber reinforced laminate with a polymerizing agent therein, classified in class 554, subclass 141.

There were several problems with this restriction.

- a) There is no class 4287;
- b) Claim 1 reads on “a layer comprised of a polymerizable component comprised of chemically reactive components” and clearly it would fall into 2nd Group II, not 2nd Group I, except that Class 554 subclass 141 is for “catalytic hydrogenation of organic compounds”; and
- c) Claim 29 is classified in both 2nd Group I and 2nd Group II.

Some of the problems could be explained as typographical errors, for instance class 4287 should have read 428, however other problem are substantive. The invention, as partially recited, reads as follows:

Claim 1. A composition of a fiber reinforced laminate material for a compression molding or thermoforming process, said composition of the laminate material comprising:

- a) a layer comprised of a thermoplastic resin;
- b) a layer comprised of *a polymerizable component comprised of chemically reactive components*;

Claims 2 and 3, which were moved to Group II, read on *polymerization agent, wherein the polymerization agent is selected from the group consisting of initiators, accelerators, cross-linkers, catalysts, drying agents or a combination thereof*.

Clearly this second restriction is incorrect because all the pending claims read on a polymerizable composition, yet after failing to reach the Applicant’s representative, the Examiner made an election to examine the claims in 2nd Group I. On initial inspection, it would seem that all the claims in the 1st Group I could fit in the 2nd Group II. Unfortunately, the 2nd Group II class and subclass don’t match the Classification language. Class 554 subclass 141 is for “catalytic hydrogenation of organic compounds” not a fiber reinforced laminate with a with a polymerizing agent therein.

The Examined acceded that a mistake had been made in his Interview Summary mailed on August 1, 2006. Clearly now it is decided that the second restriction was improper and unnecessary.

The second issue that was addressed in the Interview was that the Examiner's key reference Nakano (US 5165990) reads on "A stampable sheet which comprises 95 to 20% by weight of styrene polymer having a syndiotactic configuration (a) and 5 to 80% by weight of fibrous reinforcing material having an average fiber length of at least 1 mm (b) which is excellent in heat resistance, impact resistance, dimensional stability and dielectric properties is disclosed". The sheet, unlike the instant invention which polymerizes in a mold forming a composite, is a pre-polymerized thermoplastic, and doesn't have polymerizable components or polymerizable agents. Therefore, the cited prior art only reads on the thermoplastic component of the instant invention. A main reason for the addition of the polymerizable components is to produce a composite with a resin rich surface, which can be used in automotive parts that are visible to the driver. Typically only SMC parts are smooth enough to be used, as GMT parts don't have enough resin \ polymeric material to produce a smooth surface (i.e. a class A surface). The cited prior art doesn't touch on this aspect. To the Examiner's credit, the prosecution has addressed some issues as to form and these have been corrected. The Examiner reasserted his position that both compositions were thermoplastic, and this issue was left open until the first issue is resolved.

The third issue that was addressed in the Interview was new claims 43-46. The Examiner argues that the new claims are not supported by the specification. Claims 44-46 teach that if one wants a molded product with the resin rich surface on both sides of the molded part, then as taught on page 5, line 12 of the specification the preferred composition is a five layer laminate, comprising of: 1) an upper layer comprised of a thermoplastic resin; 2) a upper layer of reinforcing fibers; 3) a core layer comprised of a polymerizable component comprised of chemically reactive components; 4) a lower layer of reinforcing fibers; and 5) a lower layer comprised of a thermoplastic resin. The Examiner has not addressed the utility of combining layers to create the polymerized resin rich surface on both sides of the molded part. As taught by the specification in the examples and the figures, the polymerizable component migrates and polymerized during molding forming the resin rich layer that is polymerized. Again, this issue was left open until the first issue is resolved.

The Interview Summary did not reach a conclusion on the allowability of the claims, however Applicant contends that all the pending claims elected in the first restriction (1st Group I claims 1-14, 26, 27 and 29-42) should be allowed, and that the second restriction is obviously just an honest mistake that can be set right. By retracting the second restriction the Examiner validates the initial restriction, and explains the basis for selecting some of the references cited. However, none of the cited references teach a thermoplastic GMT material which polymerizes in a mold producing a composite with a resin rich surface that is polymerized. During the prosecution, the Examiner has examined claim 1 (previously presented), which is one of the independent claims in the 1st Group I, and however the restriction decision is resolved claim 1 would still be covered by the examination. The 2nd restriction is instructive in that it points to patentable elements of the Applicant's invention, not taught by the references, i.e. that is the composition does include polymerizable components, and that these polymerizable components have the ability to migrate as well as polymerize. During the course of the prosecution the Applicant has amended the claims to more exactly define the chemistry of the polymerizable components, thus therein overcoming the Examiner's rejections. Claims 2 and 3 are dependent claims, depending from claim 1, and by virtue of their dependency should be allowed. Claims 4-14, 26-27, 29-42 are dependent claims, depending from claim 1 should also be allowed. Claim 43, for the reasons cited for claim 1 should also be allowed. Dependent claims 44-46 are dependent claims, depending from claim 43, and should additionally be allowed.

In view of the foregoing remarks, this application is now believed to be in condition for allowance and such favorable action is respectfully requested on behalf of the Applicant.

Respectfully submitted,



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